Amendments to the Drawings:

Replacement sheets representing formal drawings of FIGs.

REMARKS

This application has been reviewed in light of the non-final Office Action dated February 8, 2007. Claims 1-7 are pending, with only Claim 1 in independent form. Claim 6, which was previously independent, has been amended to depend from Claim 1. Claims 1, 5, and 7 also have been amended, as described in more detail, below. Favorable reconsideration is respectfully requested.

The specification, including its abstract, has been objected to for several informalities. Applicants have amended the specification to address each of these objections, with the exception of the objection set forth at paragraph number 3 on page 2 of the Office Action. In particular, this paragraph of the Office Action objects to the lack of spacing between words between page 4, line 31 to page 5, line 1. However, these words, for example, "ExposureTime", intentionally do not have spaces between them because they are examples of metadata tags. As is common in the software arts, tags and labels often do not have internal spaces between words. Accordingly, in view of the amendments to the specification and the reasons set forth in regard to paragraph number 3 on page 2 of the Office Actions, Applicants respectfully request withdrawal of the objections to the specification.

Claim 7 was objected to because "A method", recited therein, should be --The mehod-- and "the image enhancement is color balancing", recited therein, should be --the customized image enhancement procedure is color balancing--. Applicants have adopted these suggested changes to Claim 7 and respectfully request withdrawal of the corresponding objection.

Claim 5 stands rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. The Office Action includes a proposed amendment to overcome this rejection, which Applicants have adopted. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-3 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent Publication No. 2002/0140843 (Tretter et al.) Claim 6 stands rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 7,020,330 (Schroder et al.) It should be noted, however, that Claim 6 has been amended to now depend from Claim 1, and, consequently, if Claim 1 is deemed patentable over the art of record, Claim 6 also will be patentable.

Dependent Claims 4-5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tretter in view of "Using Bayesian neural networks to classify segmented images" (Vivarelli). Dependent Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Schroder in view of "A novel approach to color cast detection and removal in digital images" (Cooper)

Applicants respectfully submit that the claims are patentable over the rejecting references taken separately or in any proper combination for at least the following reasons.

Independent Claim 1 requires a method for scene classification of a digital image. The method includes extracting one or more pre-determined camera metadata tags from the digital image. In addition, the method includes obtaining an estimate of image class of the digital image based on (1) the extracted camera metadata tags and not (2) image content features, thereby providing a metadata-based estimate. Separately from the metadata-based estimate, the method includes obtaining another estimate of image class of the digital image based on (1) image content features and not (2) the extracted camera metadata tags, thereby providing an image content-based estimate. Also, the method requires producing a final estimate of image class of the digital image based on a combination of the metadata-based estimate and the image content-based estimate.

A notable feature of Claim 1 is that it has been amended to further specify the obtaining two separate estimates of image class of the digital image: (a) a metadata-based estimate obtained based on extracted camera metadata tags and not based on image content features, and (b) an image content-based estimate obtained based on image content features and not based on the extracted camera metadata tags. These two separate estimates are used to produce a final estimate of image class of the digital image. Applicants found that performing these separate estimates and then combining them results in improved results. Support for these features can be found in the specification at least at page 9, lines 13-14 (described with regard to FIG. 1); page 4, lines 10-12; page 7, lines 15-20; page 7, line 23 to page 8, line 7; and page 8, lines 22-24.

In contrast, the Tretter et al. publication is understood to teach that the "outcome of each classification function", which Applicants understand to be 'final estimates of image class', according to Claim 1, "can be determined by

content-based analysis, meta-data analysis, or a combination of the two." Paragraph [0025]. To elaborate, the Tretter et al. publication describes "an outdoor classification function 38 to determine if the image is characteristic of an outdoor scene or indoor scene", similar to Applicants' step 600 in FIG. 6. See paragraph [0021] of the Tretter et al. publication, and compare page 7, lines 23-25 of the Applicants' specification. Accordingly, it appears that the output of a Tretter et al. publication's classification function (reference numeral 38 in FIG. 3, for example) corresponds to Claim 1's recited 'final estimate of image class.' In particular, the classification function 38 in FIG. 3 of the Tretter et al. publication identifies whether or not the image is classified as 'outdoor' or not. See paragraph [0022] of the Tretter et al. publication, and compare the 'indoor/outdoor' scene classification described, for example, at page 7, lines 23-25 and step 600 in FIG. 6 of Applicants' specification.

In this regard, the Tretter et al. publication is understood to teach a 'final estimate of image class' by a content-based analysis, a meta-data analysis, or a combination of the two. See paragraph [0025]. However, the mere teaching that a 'final estimate of image class' is based on a combination of a content-based analysis and a meta-data analysis, by itself, is not sufficient to teach all of the limitations of Claim 1 now recited. In particular, using a combination of a content-based analysis and a meta-data analysis does not teach or suggest (a) that the content-based analysis is performed separately from the meta-data analysis, thereby causing two distinct analyses to be performed, (b) that the content-based analysis is performed without meta-data information, and (c) that the meta-data analysis is performed without image content information, as required by Claim 1 (if these aspects of the Tretter et al. publication were deemed equivalent to the metadata-based estimate and the image content-based estimate, of Claim 1). Accordingly, Applicants respectfully submit that the Tretter et al. publication does not teach or suggest at least Claim 1's features of obtaining two separate estimates of image class of the digital image prior to producing a final estimate of image class, where one estimate is a metadata-based estimate obtained based on extracted camera metadata tags and not based on image content features, and another estimate is an image content-based estimate obtained based on image content features and not based on the extracted camera metadata tags.
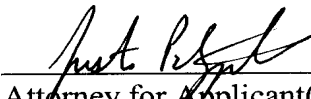
No other reference is cited as teaching or suggesting at least the above-discussed features of Claim 1.

For at least the above discussed reasons, Applicants respectfully submit that Claim 1 is patentable over the rejecting references taken separately or in any proper combination for at least the above-discussed reasons.

The other claims in this application depend from one of the independent claims discussed above and, therefore, also are submitted to be patentable for at least the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Respectfully submitted,

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